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GENERAL MEETING OF THE ARCHAEOLOGICAL INSTITUTE OF AMERICA

DECEMBER 26-28, 1918

The Archaeological Institute of America held its twentieth meeting for the reading and discussion of papers at Columbia University, New York, December 26, 27, and 28, 1918, in conjunction with the American Philological Association and the Society of Biblical Literature and Exegesis. Three sessions for the reading of papers were held and there were two joint sessions with the American Philological Association. With one exception the abstracts which follow were furnished by the authors.

THURSDAY, DECEMBER 26. 3.00 P.M.

1. Mr. Jay Hambidge, of New York, *Principles of Greek Design as Illustrated by Pottery and Bronzes in America.*

The investigation of the principles of symmetry disclosed the fact that there are, in nature, two types of proportion which may be useful to design. These are termed dynamic and static. The latter, probably, is but a special case of the former, as the circle is a special case of the ellipse. The double classification, however, is analytically useful. Static symmetry is spontaneous, no design whatever being possible without its presence in some degree. It has been consciously used several times during history, books having been written upon the subject. It is observable in nature in crystals, radiolaria, certain flowers, cross-sections of seed pods, etc. The presence of this type in art is usually apparent by inspection.

Dynamic symmetry is based upon shell growth and the law of leaf distribution in plants. Its chief function seems to be the determination of the asymmetrical balance necessary to the inter-relation of elements in growth. It is a proportion of movement. This type produces a series of rectangles possessing curious and fascinating properties. If these rectangles are used intelligently in an artistic composition the result is a product of design possessing the qualities of a growing organism. After this type of symmetry had been worked out and the properties of the rectangles developed, it was found that classic Greek art and Egyptian art furnished the only products of design in which this symmetry appeared.

It would require too much space to discuss the situation in detail but it may be said that very early in Egyptian history an empirical method of land survey was developed. This rule of thumb method of measurement was later

used in temple construction and its presence is detected in the pictorial compositions of the bas-reliefs. Knowledge of this method of measurement was obtained by the Greeks sometime during the seventh or sixth century B.C. In Greece one aspect of the idea became highly developed and has come down to us as Euclidean Geometry. The other aspect was as highly developed artistically but was later lost. The evidence that this is roughly the situation is furnished by the history of geometrical development in Greece and the remains of classic art. For example: the ground plan of the Parthenon is a simple rectangle. If the width of this plan, overall, and not the top step or the middle step but everything including the levelling course, is divided into the total length, a ratio is obtained. This ratio is recognizable as belonging to dynamic symmetry. Moreover, the rectangle divides itself in such a manner that all the details of the plan, column and angle column spacing, cella arrangement, also the elevation of the building and all its details are simply and logically established. Other Greek ground plans corroborate this.

Further corroboration is furnished by Greek bronzes, pottery, and units of decoration. For two hundred or two hundred and fifty years it would seem that the designs of Greek pottery were laid out with the same care and in accordance with the same scheme as the plans of the temples. There exists overwhelming proof that this was so. So far over four hundred examples of good Greek pottery have been examined and the fact fixed that over ninety-five per cent. run true, *i.e.*, ninety-five per cent. of Greek pottery is as architectural as the best Greek buildings. Moreover, a fairly consistent history of the development of Greek design is being obtained from the numerous examples of pottery. Thanks to the alertness of Dr. L. D. Caskey of the Boston Museum of Fine Arts and Miss G. M. A. Richter of the Metropolitan Museum of Art in New York, the labor of investigation has recently been much facilitated. Last summer Dr. Caskey began a personal investigation of the pottery in his care and found that the situation was as described. The Metropolitan Museum is now following Dr. Caskey's lead, using a checking system so that absolutely reliable material may be obtained. The results so far corroborate completely not only the writer's work but Dr. Caskey's labor as well.

2. Professor Paul V. C. Baur, of Yale University, *Some Black-Figured Vases in the Stoddard Collection, Yale University.*

In this paper four black-figured vases were discussed.

No. 111. A lecythus from Tarentum of Attic fabric dating from the end of the sixth century B.C. On the body is depicted the story of Admetus and the chariot drawn by four wild beasts, a lion, a panther, a boar, and probably a wolf. It is the earliest known representation of the subject.

No. 230. An amphora of coarse brown clay. On the obverse, a lion, on the reverse, a fallow deer. Clay and technique so closely resemble the Clazomenian sarcophagi that the writer is inclined to consider this vase a rare example of Clazomenian fabric, though Pharmakowski (*Arch. Anz.* 1912, pp. 334 f., fig. 21) calls this fabric late Milesian.

No. 231. An amphora with cover. This is a typical example of *Italo-Ionic* fabric of the sixth century B.C. On the obverse a triton-like monster swimming in water indicated by a wavy line and three fish is attacked by a nude,

bearded man, perhaps Heracles. On the reverse a deer is attacked from either side by a wolf or jackal in a thicket. At this early period wolves are rarely depicted in Greek art.

No. 232. An amphora of genuine Ionic workmanship. Encircling the body are athletic contests, a boxing-match, and a warrior, with loin-cloth, shield, and crested helmet, hurling a spear at a target. Two examples of this rare fabric are in the Metropolitan Museum, New York; elsewhere the writer knows of no other vases of this style.

3. Miss G. M. A. Richter, of the Metropolitan Museum, New York, *Notes on the Technique of Greek Vases.*

The first part of this paper discussed the theory of the addition of red ochre to Athenian clay to deepen the color. Practical experiments have shown that the addition of ochre to the clay did not have the desired result, but that the effect could be obtained by subjecting the vases to a higher temperature. Pliny's and Suidas's accounts, therefore, of the addition of ochre must refer to the red wash spread, after firing, over the surface of Athenian vases. In the second part of the paper the endeavor was made to show that Athenian vases were manufactured for practical use, and to disprove the arguments advanced at various times against this view. Finally, in support of the theory recently proposed by Mr. Jay Hambidge that Athenian pottery was designed on certain geometrical principles, stress was again laid on the fact that these vases were "jiggered" as well as "thrown," and could, therefore, be made to very exact measurements.

4. Dr. James M. Paton, of Cambridge, Massachusetts, *The Erechtheum as a Christian Church.*

It has long been agreed that the Erechtheum was at one time transformed into a Christian church and that this church had the typical form of a small basilica with narthex and apse. A close examination of the evidence makes possible a somewhat more detailed restoration. It seems probable that the nave and aisles were separated by low walls on which stood columns, and that the intercolumniations were filled by slabs which at the same time provided a barrier to communication and a back for the seat in the nave formed by the low wall. The remaining slab of the iconostasis bears a geometric decoration which finds its best parallels in such buildings as Santa Sophia at Constantinople, San Vitale and Sant' Apollinare at Ravenna, and St. Demetrius at Salonica. The crude execution, however, indicates that this slab is later than these churches, probably belonging to the late sixth or even the seventh century. It is by no means impossible that the little basilica represents a second stage in the destruction of the Greek temple, and that the first stage was its transformation into a simple "hall church" or perhaps a secular building.

5. Miss Ida C. Thallon, of Vassar College, *Some Balkan and Danubian Connections of Troy.*

As early as the neolithic period there existed in the Near East four culture areas: (1) Aegean, (2) Thessalian, (3) Upper Balkan and Danubian, (4) South

Russian and allied. The fourth, which is distinguished by polychrome painted pottery with spiral motives, included the Dnieper and Dniester valleys and the districts drained by the northern tributaries of the Danube as far as Austria, and was separated from the Aegean area by the broad diagonal line of the Balkan-Danubian group which extended from Bosnia to Troy and beyond. The third area came into contact with the fourth in Bulgaria, but with the first only sporadically and very late in the Bronze Age. Although both rectilinear and spiral motives characterize this group the painted technique is practically non-existent, and a close family resemblance can be traced from Bosnia through Serbia and southern Bulgaria into Troy and past there via Yortan, southern Pisidia, and Lycia even to Cyprus. The archaeological connections between Troy and the Balkan-Danubian district coincide with Homer's statements about the Thracian and Paeonian allies of the Trojans who came from the valleys of the Hebrus (Maritza), Strymon, and Axios (Vardar). Connection with the Danube was by way of the Morava where plentiful remains exist in Serbia, and down the rivers mentioned. The Trojan allies came from the districts to the north of those inhabited by the Greeks who had by that time encountered the declining Mycenaean civilization and were influenced by it to a far greater degree than the inhabitants of Troy, where only the sixth city affords remains of Mycenaean culture. Her connections lie rather with Anatolia and very particularly with the Balkan-Danubian area from neolithic times (Troy I and II) until the Early Iron Age (Troy VII). Dr. Leaf has demonstrated the importance of the control of the Dardanelles in the greatness of Troy and the strategic point of Salonica appears also to have been within her sphere of influence.

6. Mr. William Gates, of Baltimore, *Study in the Mayence Languages*.

No abstract of this paper was received.

FRIDAY, DECEMBER 27. 9.30 A.M.

1. Mrs. Florence Paul Berger, of the Wadsworth Athenaeum, Hartford, *The Bennington Pottery and the Early Red Ware of New England*.

To the late Albert Hastings Pitkin, whose collection of Bennington and Red Ware has recently been presented to the Morgan Memorial in Hartford by Mrs. Pitkin, we owe much interesting and valuable information regarding pottery making in New England from the end of the eighteenth to the middle of the nineteenth century. This information he had gathered during many years of collecting with the intention of eventually publishing it. He was prevented from doing this by his sudden death last year; but Mrs. Pitkin has since then edited and published his notes, adding lists of the Bennington and Red Ware, with marks and numerous illustrations.

The records of early pottery-making in the colonies are very meagre, yet there is no doubt that bricks, roof tiles, and common household pots were made from the early part of the seventeenth century. Late in the seventeenth century the Pennsylvania Germans began the redware industry in the neigh-

borhood of Philadelphia, but the earliest piece that bears a date was made in 1733. In the latter half of the eighteenth century small potteries sprang up in Maine, Massachusetts, Vermont, and at Hartford, Norwalk, Norwich, and other towns in Connecticut. Both stoneware and redware were made, usually in the form of jars, jugs, pitchers, and plates. Seth Goodwin, Thomas O'Hara Goodwin, Goodwin and Webster, and Daniel Goodale are some of the names connected with Hartford.

At Bennington, Vermont, Captain John Norton of Goshen, Connecticut, was a pioneer potter, starting his salt glazed stoneware business in 1793. His son, Judge Luman Norton, succeeded him and introduced Rockingham in more ornamental forms. When Christopher Webb Fenton entered the firm about 1839, he brought with him a practical and technical knowledge of the industry which resulted in still finer products,—the Parian, cream ware, scrod-dled, and the brilliantly glazed and colored flint enamelled ware for which Bennington is perhaps best known.

2. Professor Fiske Kimball, of the University of Michigan, *The Beginnings of Sculpture in Colonial America*.

Protestantism and pioneer conditions restricted sculpture in Colonial America even more than the other arts, and until the eve of the Revolution works of sculpture here were almost entirely imported. The first to come (1728 ff.) were casts and copies of antique works, imported by artists for models, and later by Southern planters for decorative use. Original works first appeared (ca. 1750) in connection with marble mural monuments ordered from England by wealthy members of the Anglican church. The first statues commissioned as public monuments were those of Pitt in New York and Charleston, and the equestrian figure of George III in New York, all authorized in 1766, executed by Joseph Wilton in London, and set up in 1770. Closely following was the statue of Governor Berkeley at Williamsburg, Virginia, voted in 1771, carved in London by Richard Hayward, and erected in 1773. All these illustrate the various successive phases of contemporary British sculpture, from the record of classicism. The earliest native sculptor, Mrs. Patience Wright of Bordentown, New Jersey, executed portraits in wax for some years prior to her removal to London in 1772. Her marble bust of Thomas Penn, sent from London to Philadelphia in 1773, may stand as the earliest extant work of an American sculptor.

3. Professor Charles R. Morey, of Princeton University, *Two So-called Early Christian Monuments*.

This paper will be published later in the JOURNAL.

4. Dr. John Shapley, of Brown University, *Problems of Gothic Form*.

The appearance of Wilhelm Worringer's book, *Problems of Gothic Form*, challenges the validity of many current ideas in art history, art theory, and art practice. This paper offered an extension and application of the viewpoints it expresses and carried its arguments to their logical conclusion.

5. Mr. Leicester B. Holland, of the University of Pennsylvania, *The Transformation of the Classical Pediment in Romanesque Architecture*.

This paper will be published in full in a later number of the JOURNAL.

6. Professor Allan Marquand, of Princeton University, *The Decoration of the Ceppo Hospital at Pistoia*.

Recent investigations by Mr. Rufus G. Mather, of the Ceppo Hospital archives throw much needed light on the authorship of the hospital decorations. To Benedetto Buglioni may now be definitely attributed the Coronation lunette (1510) over the entrance of the old building; also a coat of arms of the hospital on the right short side of the frieze. To Giovanni della Robbia belongs the series of medallions in the spandrels of the arches of the portico (1525-1529). The frieze representing the Seven Corporal Works of Mercy was entrusted to Santi Buglioni (1527-1529). He accomplished six of the panels; the seventh, possibly correctly attributed to Filippo di Lorenzo Baladini, was executed in stucco in 1585.

FRIDAY, DECEMBER 27. 8 P.M.

Joint Session with the American Philological Association.

1. Professor Howard Crosby Butler, of Princeton University, *The Future Protection of the Historical Monuments of Nearer Asia*.

Professor Butler pointed out the great need of protection for the important remains of antiquity still existing between the Tigris and the Aegean, but likely to be destroyed as a result of changed political conditions. He urged the "internationalization" of all historic monuments with an international commission having power to make all necessary regulations in control. The need for immediate action was emphasized.

2. Professor Charles Upson Clark, of the American Academy, Rome, *Some Art Treasures of Redeemed Italy*.

No abstract of this paper was received.

SATURDAY, DECEMBER 28. 9.30 A.M.

1. Dr. Margaret C. Waites, of Mount Holyoke College, *The Nature of the Lares and their Representation in Roman Art*.

This paper will be published in a later number of the JOURNAL.

2. Professor O. M. Washburn, of the University of California, *The Origin of the Triglyph Frieze*. (Read by Dr. J. M. Paton.)

This paper is published in this number of the JOURNAL (pp. 33ff.)

3. Mr. W. H. Goodyear, of the Brooklyn Museum, *Architectural Refinements in Mediaeval French Cathedrals as Related to the Question of Repairs or Restoration in the War Zone.*

In 1895 the Trustees of the Brooklyn Institute Museum organized a research and investigation as to the use of architectural refinements in mediaeval cathedrals. As the result of various expeditions to Italy, Northern Europe, and Constantinople, many observations have been made, and much evidence has been collected on the subject. The evidence is in the shape of seventy measured surveys, and over eight hundred enlarged photographs, most of which represent original observations. Selections from this collection were shown at Rome in 1904, at Edinburgh in 1905 and in Dublin in 1914. The purpose of this paper is to call attention to such refinements as have been discovered by the Brooklyn Museum research in the French cathedrals in the war zone, with reference to the question of the repairs and restorations which may be planned, debated or undertaken in the immediate future.

The most widely diffused refinement in French cathedrals is a system of delicately widening the nave in the upward direction. A cross-section of the nave thus resembles a delicately attenuated horseshoe form. The construction sometimes slopes the piers outward from the pavement up, as in Rouen Cathedral, and the crossing piers of Notre-Dame. Sometimes the piers are perpendicular and the outward slope begins at the arcade capitals. This arrangement is found at Rheims and at Amiens, and has the optical effect of vertical curvature. Sometimes the piers diverge outward in delicate curves beginning near the bases, as in the Cathedral of Noyon. The total amounts of divergence at the height of the clerestory when compared with the distance between piers at the bases are inconspicuous in fact and in effect, but greater than might be supposed when the habitual oversight of the facts by antiquarians and experts, as well as by casual visitors and spectators, is considered. The total maximum divergence at Noyon is about 8 inches. In Rouen Cathedral it is about 24 inches, and it is about the same at Rheims. At Amiens it is about 20 inches. Approximately the same divergence occurs in the crossing piers of Notre-Dame. The habitual oversight of the arrangement mentioned is largely due to the convergence of vertical perspective, and partly due in many cases to the delicate vertical curvatures, or bends having the effect of delicate curvature, by which the total divergence is obtained.

An even more delicate refinement of the same description is usually found in the side aisles where the widening effect is confined to the exterior sides. At Amiens the aisle responds of the chapel walls have an outward curvature of only 3 inches deflection in a height of 40 feet. The facts here are only discoverable by plumb-line sighting, and cannot be verified by the unassisted eye. This, in fact, is also generally true in the naves. Still more remarkable is the expansion of the nave system into the transepts where the verticals of the piers and window mullions are inclined in parallels to those of the nave. The purpose of this subtle arrangement is doubtless to avoid the contrast of perpendiculars in the transepts with the inclined verticals in the nave, which would make the latter conspicuous. This arrangement is found in Rouen Cathedral, in Amiens Cathedral, at St. Quentin, and elsewhere. Finally there is a crowning complexity of subtlety which gives the same transepts an

independent transverse system of widening similar to that of the nave, and crossing the nave system. This is found at Amiens, at St. Quentin, and in the crossing piers, at least, of Notre-Dame.

The paper otherwise dealt in detail by illustrative views with the problems and difficulties of repairs and restoration of such refinements. Above all it was insisted that a wide knowledge of the facts described is an essential preliminary to any general activity of restoration.

The system described in France originated in Byzantine architecture of the sixth century, as is shown by Santa Sophia and other churches in Constantinople. It spread to Italy, and thence to Northern Europe. Various examples were cited in Great Britain. Among these were Canterbury Cathedral, the Temple Church in London, Lichfield Cathedral, and St. Patrick's in Dublin.

4. Professor Norman W. DeWitt, of Victoria College, Toronto, *The Origin of the Roman Forum.*

It is customary to explain the beginnings of Rome by its fortunate situation and the Forum as a casual evolution from a central location among surrounding settlements, an explanation which fails to account for the Temple of Janus and the religious character of the Janus entrance. As Ovid, *Fasti* I, 257, inquires:

*Cum tot sint Iani, cur stas sacratus in uno,
Hic ubi iuncta foris templa duobus habes?*

In other words, to explain the Forum we must explain Janus. Warde Fowler in *Roman Festivals*, pp. 286 ff., thinks Janus the guardian of the doorway but Janus is older than the Roman town house. He is the guardian of the gateway of the walled compound that surrounded the Roman villa. Varro, *R.R.* I, 13, 2: *Vilici proximum ianuam cellam esse oportet eumque scire qui introeat aut exeat noctu quidve ferat.* Janus has a religious character because he guards private property. The Janus entrance of the Forum had a religious character. Therefore the Forum was once private property. If it was private property it must have been the courtyard of the royal residence. Numerous traditions place the site of Numa's residence at the end of the Forum and the residences of other kings on the Velia, which is suitably situated to look on the Forum as a courtyard. The *Rex* was the priest of Janus. The Forum was a royal mart. The ship's beak on coins meant foreign commerce. It was a king who built the shops, and paved and drained the Forum. Market fees may have been collected at the Janus gate. Hence the money changers. Before the temple of Saturn was built the temple of Janus must have contained the war treasure. Hence the bolts and bars and the opening in time of war. As at the rape of the Sabine women, games were instituted to attract crowds. So the numerous shows and sacrifices would bring customers. The fattest sheep was sacrificed every market day to attract the farmers (Festus, Müller, 186). The early Romans, led by the king, believed in advertising.

5. Mrs. Phila C. Nye, of Princeton, *The Oblong Ivory Caskets of the Byzantine Period.*

This paper will be published in a later number of the JOURNAL.

The following abstracts of papers announced, but not read have been received.

1. Miss Helen McClees, of Columbia University, *Notes on Women in Attic Inscriptions.*

From the inscriptions we find that women were employed as wool-workers, laundresses, children's nurses, hucksters, vendors of hemp, perfumes, sesame, salt, and *himatia*. One cobbler is known, and two physicians. A woman furnished to the state caps for public slaves and another reeds for repairing a roof. Women held office as priestesses in about forty cults, including those of three male divinities. Women and girls of noble family also served as *Arrhephori*, "initiates from the altar" at Eleusis, basket-bearers, and workers of the peplos for the Panathenaea. Women of the lower classes were often engaged in the service of Eastern divinities. Large numbers of dedications, especially to goddesses and to the gods of healing, were made by women, and they also contributed to public works. Public honors in the form of honorary decrees, golden crowns, and seats in the theatre were awarded to women. A decree of the Erechtheid tribe in favor of an *ἐπίκληρος* whose father was a member of the tribe directs the *ἐπιμεληται* to take her interests in charge and prevent her from being wronged when making purchases. The *Tabellae Defixionum* furnish curious information concerning the superstitions and also the every-day life of women of the lower classes.

2. Miss Georgiana Goddard King, of Bryn Mawr College, *Notes on the Portals of Santiago de Compostella.*

I. Aymery Picaud's account written about 1140 describes the three doors as they were finished: that of the western is less closely observed than the others and mentions no tympanum. It seems likely, recalling the steep street that led up, and the internal staircases of which traces exist, that this was like the west door of Le Puy, with which Santiago had frequent relations.

II. Comparison of photographs shows a striking likeness between the South Transept door of the Church of the Holy Sepulchre at Jerusalem and that at Santiago (the only one surviving). No door in the south of France comes quite so near, though certain details are oriental, as would be expected. The carving of the few old capitals within shows likeness to Spanish Romanesque. Of the original flanking chapels, one is dedicated to S. James. The Spanish part in the crusade, and the Spanish element here, have been overlooked through ignorance. On the south façade at Santiago stands S. James between cypress trees, says Aymery. They are wreathed with vines. Figure and flanking trees are copied at Toulouse. I know only one other case: on the back of the Harbaville Triptych cypresses wreathed with vine and ivy bow down to the Cross. There the cypresses are probably both trees of death and also symbols of the Mysteries. In the gold plates which constitute an Orphic Guide of the soul after death, the cypress stands beside the House of Hades. Compostella was a place of pilgrimage for dead souls and a gathering place for souls. S. James is here in his chthonic aspect.